contains video timing information for the encoded video data and (ii) encoded audio data and an audio header that contains audio timing information for the encoded audio data, the stream demultiplexer operating

(a) to demultiplex and depacketize the data packets without interrupting the control unit,

(b) to send the encoded video data to the video input buffer for storage there without the video timing information,

(c) to provide, for use by the control unit, ~~with~~ video messages which ~~that~~ identify where the encoded video data is stored in the video input buffer and which ~~that~~ also deal with the video timing information, and

(d) to send the encoded audio data to the audio input buffer for storage there;

a video decoder that decodes the encoded video data to produce decoded video data utilizing video instructions provided from the control unit as to where the encoded video data is stored in the video input buffer; and

an audio decoder that decodes the encoded audio data to produce decoded audio data.

42. (Currently amended) A decoder system as in Claim 41 wherein the control unit is interrupted in response to a synchronization signal for reading the video messages provided by ~~from~~ the system demultiplexer and for providing the video instructions to the video decoder.

43. (Currently amended) A decoder system as in Claim 42 wherein the control unit reads each video message provided by ~~from~~ the system demultiplexer during the period between consecutive occurrences of the synchronization signal and provides a responsive one of the video instructions to the video decoder during that period.

44. (Previously presented) A decoder system as in Claim 42 wherein the video decoder decodes the encoded video data in response to the synchronization signal.

45. (Previously presented) A decoder system as in Claim 44 wherein the video decoder decodes the encoded video data in response to an occurrence of the synchronization signal only when an unserviced one of the video instructions from the control unit is present at the video decoder.

46. (Previously presented) A decoder system as in Claim 44 wherein the control unit provides each video instruction to the video decoder in response to an occurrence of the synchronization signal for use by the video decoder in response to the next occurrence of the synchronization signal.

47. (Previously presented) A decoder system as in Claim 42 wherein the synchronization signal is provided at a substantially fixed frequency.

48. (Currently amended) A decoder system as in Claim 41 wherein the video messages comprise tags which contain the timing information and the addresses of storage locations for the encoded video data in ~~and~~ the video input buffer.

49. (Previously presented) A decoder system as in Claim 48 wherein the video instructions comprise task definition packets which contain the addresses of storage locations for the encoded video data in the video input buffer.

50. (Previously presented) A decoder system as in Claim 41 wherein the video timing information comprises at least one of a presentation time stamp and a decoder time stamp.

51. (Currently amended) A decoder system as in Claim 41 wherein the encoded audio data is stored in the audio input buffer without the audio timing information, the stream demultiplexer also operating to provide, for use by the control unit, ~~with~~ audio messages which ~~that~~ deal with the audio timing information.

52. (Previously presented) A decoder system as in Claim 41 wherein the audio messages also indicate where the encoded audio data is stored in the audio input buffer.

53. (Previously presented) A decoder system as in Claim 51 wherein the audio decoder detects audio sync words in the encoded audio data.

54. (Previously presented) A decoder system as in Claim 53 wherein the control unit utilizes the audio timing information and the audio sync words provided from the audio decoder to detect presentation times for the decoded audio data.

55. (Previously presented) A decoder system as in Claim 51 wherein the timing informations comprise time stamps.

56. (Previously presented) A decoder system as in Claim 41 further including:

a timer for maintaining local current time; and

a clock generator coupled to the timer for providing clock references for the decoder system.

57. (Currently amended) A decoder system as in Claim 41 wherein the data buffer includes a message queue for storing the video messages provided by ~~from~~ the stream demultiplexer for use by ~~to~~ the control unit.

58. (Previously presented) A decoder system as in Claim 41 further including:

a video output processor for processing the decoded video data to produce processed video data suitable for video presentation; and

an audio output processor for processing the decoded audio data to produce processed audio data suitable for digital-to-analog conversion.

59. (Currently amended) A decoder system as in Claim 58 wherein, in response to a synchronization signal generated by the video output processor, the control unit is interrupted for reading the video messages provided by ~~from~~ the stream demultiplexer and for providing the video instructions to the video decoder.

60. (Previously presented) A decoder system as in Claim 59 wherein the video decoder decodes the encoded video data in response to the synchronization signal.

61. (Previously presented) A decoder system as in Claim 58 further including an additional data buffer comprising (a) a video output buffer that stores the decoded video data and (b) an audio output buffer that stores the decoded audio data.

62. (Previously presented) A decoder system as in Claim 41 for use in an audio/video system that includes:

a video display for displaying the processed video data in picture form; and

an audio digital-to-analog converter for converting the processed audio data into analog audio data.

63. (Currently amended) A decoder system as in Claim 41 ~~as in Claim 63~~ wherein the data packets are constituted in data bytes.

64. (Previously presented) A decoder system as in Claim 63 wherein the data bytes comprise Digital Versatile Disc bytes or Digital Video Broadcast bytes.

65. (Previously presented) A decoder system as in Claim 63 further including a Digital Versatile Disc-Digital Signal Processor interface that converts a Digital Versatile Disc bit stream into a byte stream supplied to the stream demultiplexer as its incoming data stream.

66. (Previously presented) A decoder system as in Claim 63 further including a Network Port that converts a Digital Video Broadcast bit stream into a byte stream supplied to the stream demultiplexer as its incoming data stream.

67. (Currently amended) A method comprising:

receiving an incoming data stream comprising data packets each comprising at least one of (i) encoded video data and a video header that contains video timing information for the encoded video data and (ii) encoded audio data and an audio header that contains audio timing information for the encoded audio data;

demultiplexing and depacketizing the data packs without interrupting a control unit;

storing the encoded video data in a video input buffer without the video timing information;

providing, for use by the control unit, ~~with~~ video messages which ~~that~~ identify where the encoded video data is stored in the video input buffer and which ~~that~~ also deal with the video timing information;

decoding the encoded video data to produce decoded video data using video instructions provided from the control unit as to where the encoded video data is stored in the video input buffer;

storing the encoded audio data in an audio input buffer; and

decoding the encoded audio data to produce decoded audio data.

68. (Previously presented) A method as in Claim 67 further including:

generating a synchronization signal; and

interrupting the control unit in response to the synchronization signal for causing the control unit to read the video messages and to generate the video instructions.

69. (Previously presented) A method as in Claim 68 wherein the control unit reads each video message during the period between consecutive occurrences of the synchronization signal and generates a responsive one of the video instructions during that period.

70. (Previously presented) A method as in Claim 68 wherein the decoding of the encoded video data occurs in response to the synchronization signal.

71. (Previously presented) A method as in Claim 70 wherein the decoding of the encoded video data occurs in response to an occurrence of the synchronization signal only when an unserviced one of the video instructions is in existence.

72. (Previously presented) A method as in Claim 70 wherein the control unit generates each of the video instructions in response to an occurrence of the synchronization signal for use in decoding the encoded video data at the next occurrence of the synchronization signal.

73. (Previously presented) A method as in Claim 68 wherein the synchronization signal is provided at substantially a fixed frequency.

74. (Currently amended) A method as in Claim 67 wherein the encoded audio data is stored in the audio input buffer without the audio timing information, the method further including providing, for use by the control unit, ~~with~~ audio messages dealing with the timing information.

75. (Previously presented) A method as in Claim 74 wherein the audio messages also indicate where the encoded audio data is stored in the audio input buffer.

76. (Currently amended) A method as in Claim 67 ~~51~~ further including detecting sync words in the encoded audio data.

77. (Previously presented) A method as in Claim 76 further including utilizing the audio timing information and the sync words to determine presentation times for the decoded audio data.

78. (Previously presented) A method as in Claim 67 further including:

processing the decoded video data to produce processed video data suitable for video presentation; and

processing the decoded audio data to produce processed audio data suitable for digital-to-analog conversion.

79. (Previously presented) A method as in Claim 78 further including:

utilizing a video output processor that processes the decoded video data to generate a synchronization signal; and

interrupting the control unit in response to the synchronization signal for reading the video messages and for generating the video instructions.

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80. (Previously presented) A method as in Claim 79 wherein the decoding of the encoded video data occurs in response to the synchronization signal.

81. (Previously presented) A method as in Claim 78 further including:

displaying the processed video data in picture form; and

converting the processed audio data into analog audio data.

82. (Previously presented) A method as in Claim 67 further including converting an incoming bit stream into a byte stream that constitutes the incoming data stream.